Chapter 14
Noise

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INTRODUCTION

Alternative 4, "EBMUD-Only Lower American River Delivery," and Alternative 5, "Sacramento River Delivery," in this REIR/SEIS include facilities that are very similar to those discussed for Alternative 3, "Joint Water Supply," in the 1997 DEIR/EIS. The 1997 DEIR/EIS therefore includes a full discussion of the environmental setting for these alternatives, and that information is summarized below as appropriate. Because Alternative 6, "Freeport East Delivery," Alternative 7, "Freeport South Delivery," and Alternative 8, "Bixler Delivery," include facilities in locations that were not described in the 1997 DEIR/EIS, additional information is provided in the "Affected Environment" section below.

The 1997 DEIR/EIS includes descriptions of criteria that are used to determine the significance of impacts. These criteria are summarized below.

AFFECTED ENVIRONMENT

Noise Environment

A full discussion of local noise-related issues, regulatory standards, and existing noise conditions for Sacramento and San Joaquin Counties is contained in the 1997 DEIR/EIS. The following information is provided to supplement that information and to address aspects of the additional alternatives that were not evaluated in the 1997 DEIR/EIS. The sections below also include additional information on noise standards in Contra Costa County to address Alternative 8, "Bixler Delivery."

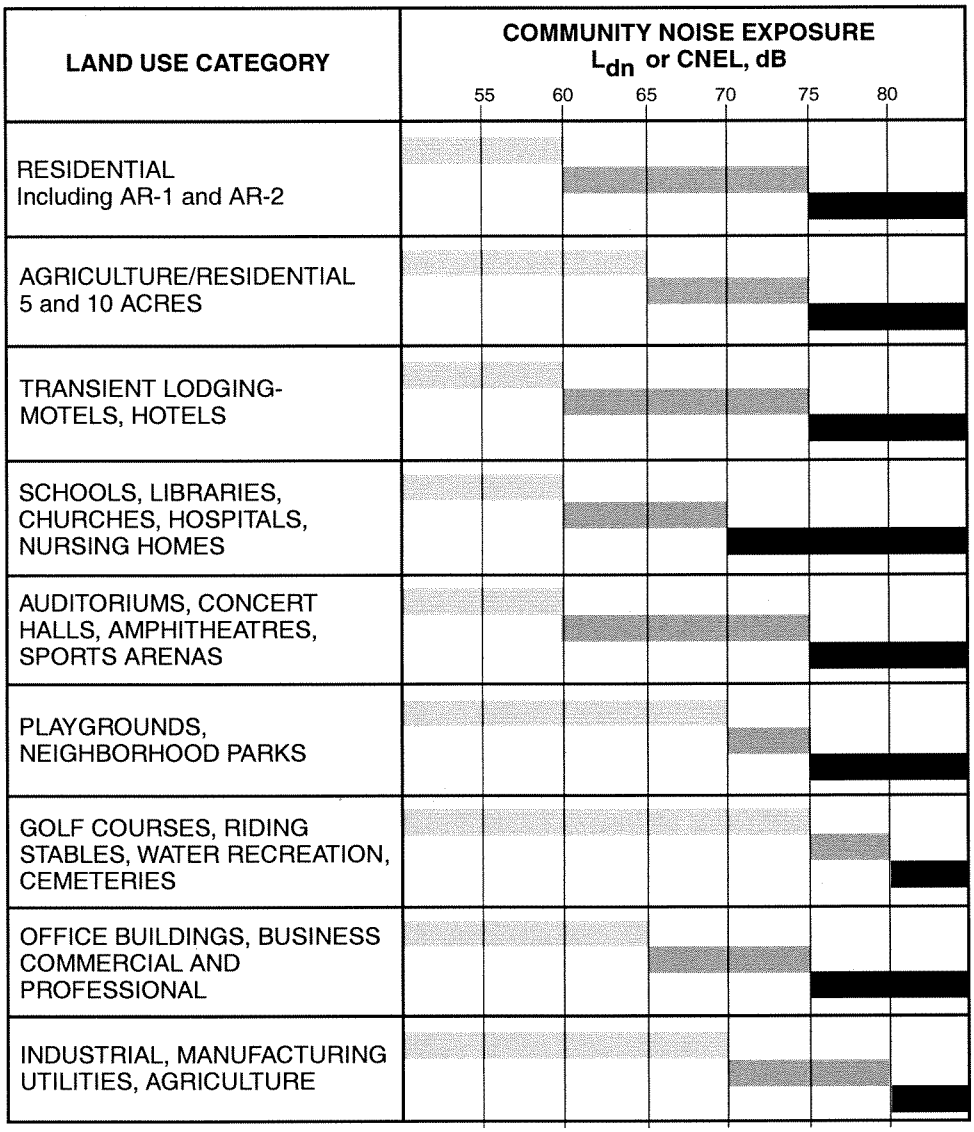
Noise Regulations

As described in the 1997 DEIR/EIS, the City, County of Sacramento, and San Joaquin County have adopted noise ordinances, which serve as enforcement mechanisms for controlling noise, and general plan noise elements, which are used as planning guidelines to ensure that long-term noise generated by a source is compatible with adjacent land uses.

The Sacramento County noise ordinance sets exterior noise standards and special requirements for construction noise. Noise limits are calculated as a 24-hour average of sound measurements in dBA that adds greater weight to nighttime (e.g., 10 p.m. to 7 a.m.) sounds. A dBA is a measurement of sound that approximates the way the human ear responds to sound levels. The exterior noise standards for episodes of noise lasting 30 minutes or more are 55 dBA from 7:00 a.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m. Shorter duration noise episodes have higher maximum acceptable noise levels. Construction noise is specifically exempted from the exterior noise standards, provided that construction activities do not take place between 8:00 p.m. and 6:00 a.m. on weekdays and 8:00 p.m. and 7:00 a.m. on weekends.

The Sacramento County noise element provides compatibility guidelines that compare various land uses with a range of noise levels to determine what are "acceptable," "conditionally acceptable," and "unacceptable" levels (Figure 14-1). According to the guidelines, the maximum conditionally acceptable noise level for noise-sensitive land uses, such as residences, is 75 dBA day-night average sound level (Ldn), and the maximum acceptable noise level is 60 dBA Ldn.

The City's noise ordinance is the same as the County's noise ordinance and is enforced by the County. The City's noise element provides compatibility guidelines that are the same as the County's guidelines.



Legend

ACCEPTABLE

Specified land use is satisfactory. No noise mitigation measures are required.

CONDITIONALLY ACCEPTABLE

Use should be permitted only after careful study and inclusion of protective measures as needed for intended use and to satisfy policies of the Noise Element.

UNACCEPTABLE

Development is not feasible in accordance with the Noise Element. Use is prohibited.

This figure is to be used to determine the necessity for an acoustical study based on the exterior, pre-mitigation noise exposure level. Any mitigation must achieve noise levels that are in compliance with the policies of the Noise Element.

Source: County of Sacramento 1993.

Jones & Stokes

Figure 14-1
Sacramento County Land Use Compatibility for Community Noise Environments

San Joaquin County's noise ordinance states that no sound level shall exceed 65 dBA Ldn at the property line. The noise ordinance also specifically exempts temporary construction noise as long as construction does not occur between 7:00 p.m. and 7:00 a.m. The San Joaquin County noise element states that exterior noise levels of 65 dBA Ldn or less for residential development and 60 dBA Ldn or less for schools, group care facilities, and hospitals are acceptable.

Contra Costa County's General Plan Noise Element serves as the primary mechanism for ensuring that noise levels do not conflict with land use categories in a given area. For the industrial, manufacturing, utilities, and agricultural land use categories, normally acceptable community noise exposure is 50 to 70 Ldn. Conditionally acceptable noise levels range from 70 to 80 Ldn, meaning that new construction or development should be undertaken only after a detailed analysis of the noise-reduction requirements is made and needed noise insulation features are included in the design. Normally, unacceptable noise levels for these land uses range from 75 to 85 Ldn (Contra Costa County General Plan 1991).

Although there is no specific county ordinance outlining enforcement mechanisms for controlling noise, county policy dictates that construction activities are to be concentrated during the hours of the day that are not noise sensitive for adjacent land uses. They should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods. Noise impacts on the natural environment, including impacts on wildlife, will be evaluated and considered in review of development projects.

Existing Noise Conditions and Noise-Sensitive Land Uses

Alternative 4: EBMUD-Only Lower American River Delivery

The existing noise conditions along the pipeline alignments and at the intake location for this alternative are essentially identical to those outlined for Alternatives 2 and 3 in the 1997 DEIR/EIS and include typical urban, traffic, and agricultural noise sources.

Alternative 5: Sacramento River Delivery

Existing noise sources near the Sacramento River and intake facility site for Alternative 5 include automobile and boating traffic, aircraft, and trains. The intake facility would be located in an industrialized, urban portion of the City with typical highway and commuter traffic noise sources.

The remainder of the pipeline corridor would follow the alignment described for Alternative 3 in the 1997 DEIR/EIS.

Alternative 6: Freeport East Delivery

Vehicle and boating traffic provide the primary noise sources around the Sacramento River Bridge and proposed intake facility for Alternative 6. Several additional noise sources exist as the pipeline continues east to the FSC, including heavy traffic on Meadowview Road, Mack Road, SR 99, and Power Inn Road. As the pipeline continues east past the intersection of Excelsior and Gerber Streets, natural sources, such as wind and birds, are the predominant noise sources until the alignment reaches the FSC.

Alternative 7: Freeport South Delivery

Since most of the pipeline corridor from Freeport to Stockton would be sited in the existing roadway off I-5, Thorton Road, or Pacific Avenue, the predominant noise source would result from moderate to heavy vehicle traffic. Noise levels along I-5 range from 50 to 60 dBA Ldn and are generated not only by automobile traffic, but also by overhead aircraft, trains, and industrial facilities.

Alternative 8: Bixler Delivery

In Contra Costa County, traffic along freeways, such as State Route 4, and major arterials are the primary source of vehicular traffic noise (Contra Costa General Plan 1991).

Other sources of noise in the county include rail operations, air traffic activity, and industrial facilities. The primary noise problem in the county near the project area is from State Route 4, although complaints have been filed for loud music, parties, high-school sporting events, and livestock.

In and around Indian Slough, vehicle and boating traffic are the primary sources of noise. Given that the land use in the area is primarily agricultural, additional noise sources could include harvesting equipment (e.g., large trucks, plows) and area livestock.

ENVIRONMENTAL CONSEQUENCES

Methods and Assumptions

The facilities associated with Alternative 4, "EBMUD-Only Lower American River Delivery," and Alternative 5, "Sacramento River Delivery," are essentially identical to Alternative 3, "Joint Water Supply," as described in the 1997 DEIR/EIS. Therefore, impacts and mitigation measures described for Alternative 3 also apply to Alternatives 4 and 5. Alternative 6, "Freeport East Delivery," and Alternative 7, "Freeport South Delivery," are also similar to Alternative 3 in terms of local noise conditions, and, therefore, the significance thresholds and criteria used in the 1997 DEIR/EIS also apply to this alternative. Alternative 8, "Bixler Delivery," is located within Contra Costa County. For this alternative, guidance provided by the Contra Costa County General Plan is used.

Significance Criteria

The significance criteria described in the 1997 DEIR/EIS were used to analyze the additional alternatives included in this document and include assessing whether an alternative would result in substantially increased noise levels for an extended period near noise-sensitive land uses or expose people to severe noise levels. In addition, for Alternative 8, guidelines from the Contra Costa County General Plan were applied in evaluating the effects of both operational and construction-related noise sources. Activities that would create noise during the evening and early morning periods are specifically considered and addressed in the alternatives impact discussion.

Construction-related noise impacts are evaluated against the noise ordinance guidelines of Sacramento and San Joaquin counties and the City of Sacramento. These noise ordinances specifically exempt construction-related noise.

Operation-related noise impacts are also evaluated against the noise element guidelines of Sacramento, Contra Costa, and San Joaquin Counties and the City of Sacramento for each respective portion of the project.

Impacts Found to Be Less Than Significant

Alternative 4: EBMUD-Only Lower American River Delivery

The impacts and mitigation requirements associated with Alternative 4 are identical to those described for Alternative 3 in the 1997 DEIR/EIS. These impacts include:

- Increased noise levels from operation of project facilities, including the new intake and pumping plants.
- Short-term increase in construction-related noise levels at project facility sites, including intake, pipeline, pumping plants, and treatment facilities in the East Bay.

These impacts are less than significant. No mitigation is required.

Alternative 5: Sacramento River Delivery

This alternative would result in impacts that are essentially identical to those described for Alternative 3 in the 1997 DEIR/EIS and summarized above under Alternative 4. However, the intake structure for this alternative would be located on the Sacramento River just downstream of the confluence with the American River. This location is considered to be slightly less sensitive than the Site 5 location, as it is near the City's existing intake structure, a major

freeway, commercial and industrial land uses, and heavy boat traffic.

These impacts are less than significant. No mitigation is required.

Alternative 6: Freeport East Delivery

This alternative would result in impacts that are very similar to those described for Alternative 3 in the 1997 DEIR/EIS and summarized above. However, the intake structure for this alternative would be located on the Sacramento River upstream of the Freeport Bridge. This location is considered to be slightly less sensitive than the Site 5 location, as it is near a major freeway, commercial and vacant land uses, and heavy boat traffic.

These impacts are less than significant. No mitigation is required.

Alternative 7: Freeport South Delivery

The impacts from short-term construction noise levels would be very similar to those described for Alternative 3 in the 1997 DEIR/EIS. However, as for Alternative 6, the intake structure for this alternative would be located on the Sacramento River upstream of the Freeport Bridge. This location is considered to be slightly less sensitive than the Site 5 location, as it is near a major freeway, commercial and vacant land uses, and heavy boat traffic.

These impacts are less than significant. No mitigation is required.

Alternative 8: Bixler Delivery

Impact: Increase in Noise Levels from the Operation of the Bixler Delivery Intake Structure and WTP in Indian Slough. The intake structure at Indian Slough would be enclosed in an acoustically efficient structure. In addition, the intake would be located between the above-ground Mokelumne Aqueducts and active railroad tracks. No residences are immediately adjacent to the intake site. As a result, operational noise from the facility would not result in unacceptable noise levels.

Operation of the WTP could result in some increased noise levels. However, WTPs are not major producers of noise, and the sound levels anticipated would be consistent with nearby agricultural activities.

This impact is less than significant. No mitigation is required.

Impact: Short-term Increase in Noise Levels from Construction Activities. Combined noise levels from construction of the intake, WTP, and pipeline in Indian Slough could reach the 80 to 90 dBA range at the construction site. Construction would be temporary and crews would abide by the guidelines laid out in the Contra Costa County General Plan Noise Element.

This impact is less than significant. No mitigation is required.

Significant Impacts and Mitigation Measures

None of the project alternatives would result in significant impacts related to noise, and no mitigation measures are required.